

### AMENDMENTS TO THE CLAIMS

Claim 1. (Currently amended) An assay for detecting and identifying one or more ~~micro-organisms~~bacteria in a sample, wherein said assay comprises detecting the presence or absence of at least two conserved molecular markers in the sample, thereby identifying one or more ~~microorganisms~~bacteria, wherein at least one molecular marker is conserved in Gram-positive bacteria and is selected from the group comprising the sequences with SEQ ID NOs 1-62, 326-359, and at least one molecular marker is conserved in Gram-negative bacteria and is selected from the group comprising the sequences with SEQ ID NOs 194-232, 238-239, 242-254, and 431-442.

Claims 2-7. (Canceled)

Claim 8. (Currently amended) A method for diagnosing bacterial infection of a sample comprising screening the sample for the presence of at least two conserved molecular markers and diagnosing bacterial infection, wherein at least one molecular marker is conserved in Gram-positive bacteria and is selected from the group comprising the sequences with SEQ ID NOs 1-62, 326-359, and at least one molecular marker is conserved in Gram-negative bacteria and is selected from the group comprising the sequences with SEQ ID NOs 194-232, 238-239, 242-254, and 431-442.

Claims 9-19. (Canceled)

Claim 20. (New) An assay for detecting and identifying *Bacillus anthracis* in a sample, wherein said assay comprises detecting the presence or absence of conserved molecular markers in the sample, thereby identifying *Bacillus anthracis*, wherein said molecular marker is selected from the group comprising the sequence with SEQ ID NO 14.

Claim 21. (New) An assay for detecting and identifying *Staphylococcus aureus* in a sample, wherein said assay comprises detecting the presence or absence of conserved molecular markers in the sample, thereby identifying *Staphylococcus aureus*, wherein said molecular marker is selected from the group comprising the sequence with SEQ ID NO 23.

Claim 22. (New) An assay for detecting and identifying *Francisella tularensis* in a sample, wherein said assay comprises detecting the presence or absence of conserved molecular markers in the sample, thereby

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identifying *Francisella tularensis*, wherein said molecular marker is selected from the group comprising the sequence with SEQ ID NO 230.

Claim 23. (New) An assay for detecting and identifying *Brucella* in a sample, wherein said assay comprises detecting the presence or absence of conserved molecular markers in the sample, thereby identifying *Brucella*, wherein said molecular marker is selected from the group comprising the sequences with SEQ ID NO 222 to 229.